REMARKS

This Amendment, submitted in response to the Office Action dated December 10, 2004, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-12 are now all the claims pending in the application. Claims 1-10 have been amended for reasons of precision of language and consistency. The amendments to claims 1-10 were not made for reasons of patentability as evidenced by the discussion below.

I.   Specification

The Examiner has objected to the disclosure for containing some informalities. The Specification has been amended as indicated above. Consequently Applicant respectfully requests that the objection to the specification be withdrawn.

II.   Claim Objections

Claims 1-10 have been objected to for informalities. Claims 1-10 have been amended as indicated above. Consequently, Applicant respectfully requests that the objection to the claims be withdrawn.

III.   Rejection of claims 1-4 under 35 U.S.C. § 103

Claims 1-4 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu et al. (U.S. Patent No. 6,549,512) in view of Yamano et al. (U.S. Patent No. 6,445,731).

Claim 1 recites "wherein said means for producing carrier constellation information is adapted to produce for at least one respective carrier subset a set of parameter values from which constellations of all carriers in said at least one respective carrier subset can be retrieved through interpolation." The Examiner asserts that this aspect of the claim is disclosed in Wu col. 6, lines 6-44 and col. 18, line 54- col. 19, line 13.

Wu discloses having a common nested constellation covering all different sizes. MDSL DMT uses a maximum up to 8 bits constellation to reduce the prevision requirements on DSP and AFE. The constellation encoding is therefore easily implemented with table lookup. Col. 6, lines 1-5. Further, Wu discloses implementing a bit-loading algorithm for all the sub-carriers instead of encoding each frequency sub-carrier individually and the sub-carriers can be grouped and encoded together. Col. 6, lines 30-34.

Therefore, Wu does not appear to disclose "to produce for at least one respective carrier subset a set of parameter values." In particular, a subset of parameter values is not produced since the constellation encoding of Wu is performed by implementing a lookup table. Further, there is no teaching or suggestion that the parameter values are produced for at least one respective *carrier subset.*

The Examiner concedes that Wu does not disclose "a set of parameter values from which constellations of all carriers in said at least one respective carrier subset can be retrieved through interpolation" and cites Yamano col. 7, lines 41-67 and col. 11, lines 1-67 to cure the deficiency. However, the respective column and lines cited by the Examiner disclose that a digital signal

output by summing node 319 is provided to a conventional resampler 302. Resampler 302

interpolates this digital signal to generate samples which match the symbol rate of the transmitter

circuit. Further, Yamano discloses the determination of an IDLE and DATA state. However,

there is no teaching or suggestion that a set of parameter values from which constellations of all

carriers in said at least one respective carrier subset can be retrieved through the interpolation.

For at least the above reasons, claim 1 and its dependent claims should be deemed

patentable. To the extent claim 7 recites similar elements, claim 7 and its dependent claims

should be deemed patentable for at least the same reasons.

IV.   Rejection of claims 7 and 8 under 35 U.S.C. § 103

Claims 7 and 8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over

the applicant's admitted prior art (AAPA) of the instant application in view of Yamano et al.

Claim 7 recites "interpolating means adapted to retrieve constellations of all carriers in at

least one respective carrier subset from a respective set of parameter values that forms part of

said carrier constellation information." The Examiner concedes that AAPA does not teach this

aspect of claim 7 and cites Yamano to cure the deficiency. However, as indicated above with

respect to claim 1, Yamano is directed to a method and apparatus for interpolating a signal in

order to determine the existence of DATA and an IDLE state. See col. 11, lines 1-65. Yamano

does not retrieve *constellations* of all carriers in at least one respective *carrier subset* from a

respective *set of parameter values* that forms part of said carrier constellation information. For

at least the above reason, claim 7 and its dependent claims should be deemed patentable.

V.   Rejection of claim 5 under 35 U.S.C. § 103

Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu et al.

and Yamano et al. and further in view of section 9 of the ADSL Standard Specification Release 2

entitled 'Network and Customer Installation Interfaces-Asymmetric Digital Subscriber Line

(ADSL) Metallic Interface', published by the American National Standards Institute (ANSI)

under the reference ANSI T1.413-1998 (hereinafter "ANSI"). Claim 5 should be deemed

patentable by virtue of its dependency to claim 1 for the reasons set forth above. Moreover,

ANSI does not cure the deficiencies of Wu and Yamano.

VI.   Rejection of claim 10 under 35 U.S.C. § 103

Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over admitted

prior art of the instant application and Yamano et al. and further in view of section 9 of the

ADSL Standard Specification Release 2 entitled 'Network and Customer Installation Interfaces-

Asymmetric Digital Subscriber Line (ADSL) Metallic Interface', published by the American

National Standards Institute (ANSI) under the reference ANSI T1.413-1998 (hereinafter

"ANSI"). Claim 10 should be deemed patentable by virtue of its dependency to claim 7 for the

reasons set forth above. Moreover, ANSI does not cure the deficiencies of Yamano.

VII.   Allowable Subject Matter

The Examiner has indicated that claims 6 and 9 contain allowable subject matter and

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims. At the present time, Applicant has not amended claims 6 and

9 since Applicant believes claims 6 and 9 will be deemed allowable, without amendment, for the reasons set forth above.

VIII. New Claims

Applicant has added claims 11 and 12 to provide a more varied scope of protection. Claims 11 and 12 should be deemed patentable by virtue of their dependency to claims 1 and 7 for the reasons set forth above.

IX.   Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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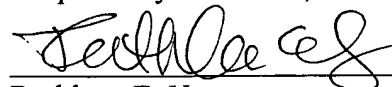
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